



**What Is Claimed Is:**

1. An isolated polynucleotide encoding a phytase having the amino acid sequence of SEQ ID NO:2.

2. An isolated polynucleotide selected from the group consisting of:

- a) SEQ ID NO:1;
- b) SEQ ID NO:1 wherein T is substituted with U.

3. The polynucleotide of claim 1, wherein the polynucleotide is isolated from a prokaryote.

4. An expression vector comprising the polynucleotide of claim 1.

5. The vector of claim 4, wherein the vector is a plasmid.

6. The vector of claim 4, wherein the vector is virus-derived.

7. A host cell transformed with the vector of claim 4.

8. The host cell of claim 7, wherein the cell is prokaryotic.

9. A method for producing an enzyme comprising growing a host cell of claim 7 under conditions which allow the expression of the enzyme and isolating the enzyme encoded by the nucleic acid.